DOINGWHATWORKS

LEARNING TOGETHER ABOUT MATHEMATICS PREPARATION FOR ALGEBRA

Purpose	District mathematics leaders and administrators are encouraged to use this tool to become familiar with the National Mathematics Advisory Panel report and consider implications for systemwide changes. Individuals independently review selected print and media items from the Doing What Works website before coming together for a discussion about the priorities for their district.
Materials	List of Learning Options and Note-taking Guide Summary record of group discussion
Media	Options for Individual Viewing (1) *Visual Diagram*. (2) *Preparing Students for Success in Algebra*, multimedia overview (3) National Mathematics Advisory Panel Report, Executive Summary (4) *District Perspective on Focused Curriculum,* Interview with Ken Mathews, New Haven School District Mathematics Supervisor
Topic	National Math Panel: Critical Foundations for Algebra
Practice	Mathematics Preparation for Algebra

1. Identify the group of individuals who represent Pre-K-12 leadership for mathematics in the district. Depending on the configuration of roles and responsibilities in your district, the group might include mathematics supervisors, curriculum specialists, building principals, team leaders, mathematics coaches, and experienced mathematics teachers. Although the focus of this tool is Pre-K-8 foundations for algebra, it is important to also include those responsible for secondary mathematics to provide perspective on the status of algebra preparation in the district.

2. Provide each participant with a copy of the Learning Options and Note-Taking Guide. Ask each to review at least two of the four options, using the note-taking guide as a way to record their reactions while viewing and reading. They will use those notes in the group discussion about the implications of the National Mathematics Advisory Report for the district. Providing learning options introduces participants to the "menu approach" that is characteristic of Doing What Works and allows for different learning preferences.

3. Convene a two-part discussion of the group, approximately 1 week after providing the assignments to allow time for website exploration. Devote the first part of the discussion to listening to what participants have gleaned through their review of media and print materials. Follow the topic list on the note-taking guide to organize the discussion, asking participants what they learned from various sources about a topic. Keep summary notes of major points on a flip chart. Ask questions such as:

   What are the major messages about _____ (topic)?
   What points resonate with you about _____ (topic)?
   What was new to you in the discussion of _____(topic)?
   What might be potentially confusing or misunderstood about _____(topic)?

   If the group is larger than ten, break into smaller groups to allow discussion opportunities for all. Seek consensus about the major messages or "take aways" in each topic area. Look for common themes or trends by grouping messages that are alike.

4. The second part of the discussion should tackle the implications for the district of the major messages. Transfer major messages that were recorded during the first part of the discussion to the first column of the Implications Worksheet. Ask participants for their perceptions of the current status of the district in terms of the key message (column #2). If this is an area where change would be needed for the district to conform to the key message, complete columns #3 (what change would be needed) and #4 (who would be responsible and under what auspices would the change occur).

5. The completed Implications Worksheet is a blueprint for decision making by policy leaders in the district.

Learning Options and Note-Taking Guide

Select from the different learning options below to familiarize yourself with the major points of the National Mathematics Advisory Panel report. Review at least two of the options below prior to the group discussion. All materials will be found at (link).

(1) *Visual Diagram* (link)
(2) *Critical Foundations for Algebra (link)*, multimedia overview
(3) National Mathematics Panel Report Executive Summary (link)
(4) *District Perspective on Focused Curriculum (link),* video interview with Ken Mathews, New Haven School District Mathematics Supervisor

As you review an item, list any key points according to the topic list below. Because you will be bringing these points into discussions with your colleagues, you may want to note a source so that you can refer to particular points during discussions.

TOPIC	KEY POINTS TO REMEMBER	SOURCE
Importance of algebra for all students		
Benchmarks for mastery		
Pre-algebra topic emphasis		
Number sense		
Fractions, decimals, percents		

State standards and assessments		
Automaticity with facts; fluency with operations		
Conceptual understanding and problem solving		

Implications for District

Major Messages	Perceptions of Current Status in District	Nature of Change Needed in District	Responsibility/Locus for Action
Example: Expect and assess for mastery of critical topics and skills at key points Pre-K-8	*Example: No consistent expectations across schools in district*	*Example: Develop or adopt elementary and middle school benchmarks and related assessments—will require adjusting current scope and sequence and may involve supplementing existing curricular materials*	*Example: Mathematics curriculum committee should undertake this goal*